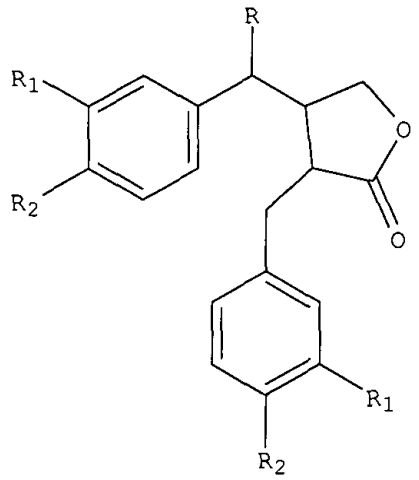
AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): Method of inhibiting overactivity of phagocytes or lymphocytes in an individual by administering to said individual an effective amount of a lignan, wherein said lignan has the formula



wherein R is H or OH when R_1 is OCH_3 and R_2 is OH or R is H when R_1 is OH and R_2 is H,

wherein said lignan is hydroxymatairesinol when R is OH, R_1 is OCH_3 and R_2 is OH, or is matairesinol when R is H, R_1 is OCH_3 and R_2 is OH or is enterolactone when R is H, R_1 is OH and R_2 is H, and

wherein

i) the phagocytes are neutrophils and the lignan is hydroxymatairesinol or matairesinol or a mixture thereof, or

ii) the phagocytes are cells of myeloid origin and the lignan is enterolactone or hydroxymatairesinol or a mixture thereof, or

iii) the lymphocytes are T-lymphocytes and the lignan is hydroxymatairesinol, matairesinol or enterolactone or a mixture thereof.

Claim 2 (original): The method according to claim 1, wherein the phagocytes are neutrophils and the lignan is hydroxymatairesinol or matairesinol or a mixture thereof.

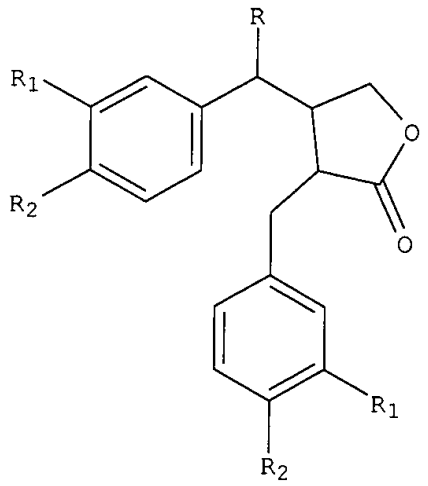
Claim 3 (original): The method according to claim 1, wherein the phagocytes are cells of myeloid origin and the lignan is enterolactone or hydroxymatairesinol or a mixture thereof.

Claim 4 (original): The method according to claim 1, wherein the lymphocytes are T-lymphocytes and the lignan is hydroxymatairesinol, matairesinol or enterolactone or a mixture thereof.

Claim 5 (original): The method according to claim 2, wherein oxidative burst caused by stimulus of the neutrophils is decreased.

Claim 6 (original): The method according to claim 2, wherein the myeloperoxidase activity in converting the reactive oxygen species, released by oxidative burst caused by stimulus of said neutrophils, is decreased.

Claim 7 (currently amended): Method of treating or preventing an acute ischemia-reperfusion injury or a chronic condition, caused by overactivity of phagocytes or lymphocytes in an individual, said method comprising inhibiting the overactivity of phagocytes or lymphocytes in an individual by administering to said individual an effective amount of a lignan, wherein said lignan has the formula



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wherein R is H or OH when R_1 is OCH_3 and R_2 is OH or R is H when R_1 is OH and R_2 is H,

wherein said lignan is hydroxymatairesinol when R is OH, R_1 is OCH_3 and R_2 is OH, or is matairesinol when R is H, R_1 is OCH_3 and R_2 is OH or is enterolactone when R is H, R_1 is OH and R_2 is H, and

wherein

i) the phagocytes are neutrophils and the lignan is hydroxymatairesinol or matairesinol or a mixture thereof, or

ii) the phagocytes are cells of myeloid origin and the lignan is enterolactone or hydroxymatairesinol or a mixture thereof, or

iii) the lymphocytes are T-lymphocytes and the lignan is hydroxymatairesinol, matairesinol or enterolactone or a mixture thereof.

Claim 8 (original): The method according to claim 7, wherein the phagocytes are neutrophils and the lignan is hydroxymatairesinol or matairesinol or a mixture thereof.

Claim 9 (original): The method according to claim 7, wherein said acute ischemia-reperfusion injury is injury in myocardial infarction, stroke, transplantation, adult respiratory distress syndrome, ischemic heart disease, or endotoxic or hemmorhagic shock.

Claim 10 (original): The method according to claim 8, wherein said acute ischemia-reperfusion injury is injury in myocardial infarction, stroke, transplantation, adult respiratory distress syndrome, ischemic heart disease, or endotoxic or hemmorhagic shock.

Claim 11 (currently amended): The method according to claim 7, wherein said chronic condition is rheumatoid arthritis, an allergic ~~conditions~~ condition including also asthma, an inflammatory condition including also inflammatory bowel disease or an inflammatory condition of the skin, HIV, AIDS, psoriasis, Parkinson's disease, Alzheimer's disease, an autoimmune disease, type I or type II diabetes, hypercholesterolemic atherosclerosis, cataract or amylotrophic lateral sclerosis.

Claim 12 (currently amended): The method according to claim 8, wherein said chronic condition is rheumatoid arthritis, an allergic ~~conditions~~ condition including also asthma, an inflammatory condition including also inflammatory bowel disease or an inflammatory condition of the skin, HIV, AIDS, psoriasis, Parkinson's disease, Alzheimer's disease, an autoimmune disease, type I or type II diabetes, hypercholesterolemic atherosclerosis, cataract or amylotrophic lateral sclerosis.

Claim 13 (original): The method according to claim 7, wherein the lymphocytes are T-lymphocytes and the lignan is hydroxymatairesinol, matairesinol or enterolactone or a mixture thereof.

Claim 14 (currently amended): The method according to claim 13, wherein the chronic condition is an allergic or an autoimmune disease, psoriasis, type I ~~and~~ or type II diabetes, rheumatoid arthritis, and type I ~~and~~ or type II hypersensitivity reactions, asthma, and inflammatory bowel disease, a rejection reaction due to tissue transplantation, atherosclerosis, or multiple sclerosis.

Claim 15 (original): The method according to claim 7 wherein the phagocytes are cells of myeloid origin, the TNF-α release of which is reduced, and the lignan is enterolactone or hydroxymatairesinol.

Claim 16 (original): The method according to claim 15, wherein the condition is an inflammatory condition, rheumatoid arthritis, inflammatory bowel disease including also Crohn's disease, Alzheimer's disease, or type I or type II diabetes, atherosclerosis, psoriasis, osteoporosis.

Claim 17 (new): The method according to claim 1, wherein said lignan is hydroxymatairesinol or a mixture of hydroxymatairesinol and matairesinol.

Claim 18 (new): The method according to claim 1, wherein said lignan is hydroxymatairesinol or a mixture of hydroxymatairesinol and enterolactone.

Claim 19 (new): The method according to claim 7, wherein said lignan is hydroxymatairesinol or a mixture of hydroxymatairesinol and matairesinol.

Claim 20 (new): The method according to claim 7, wherein said lignan is hydroxymatairesinol or a mixture of hydroxymatairesinol and enterolactone.